

## ABSTRACT

### **METHOD OF ORIENTING AN ORTHODONTIC APPLIANCE TO A TOOTH**

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The relative orientation of an orthodontic appliance and a tooth is selected by providing a first relative orientation between the appliance and the tooth, and defining a first set of hypothetical reference lines or rays between the base of the appliance and the tooth in virtual three-dimensional space. The distance along each ray is then determined. Next, the relative orientation of the appliance and the tooth is changed to a second orientation. A second set of rays is defined between the appliance and the tooth, and the distance along each ray is determined. A mathematical computation is then carried out on the determined distances in order to help determine whether the first orientation or the second orientation provides a better fit between the base of the appliance and the tooth surface.

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